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# The use of GeoPDF to enable United States Government collaboration

## Pattern analysis of the Lord's Resistance Army (LRA) and internally displaced people (IDP)



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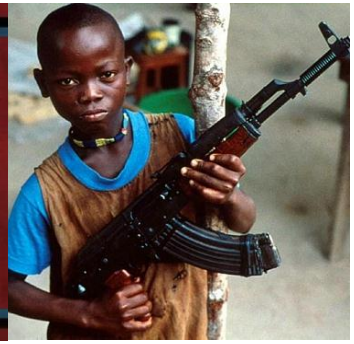
# Geospatial Predictive Analytics and GeoPDF

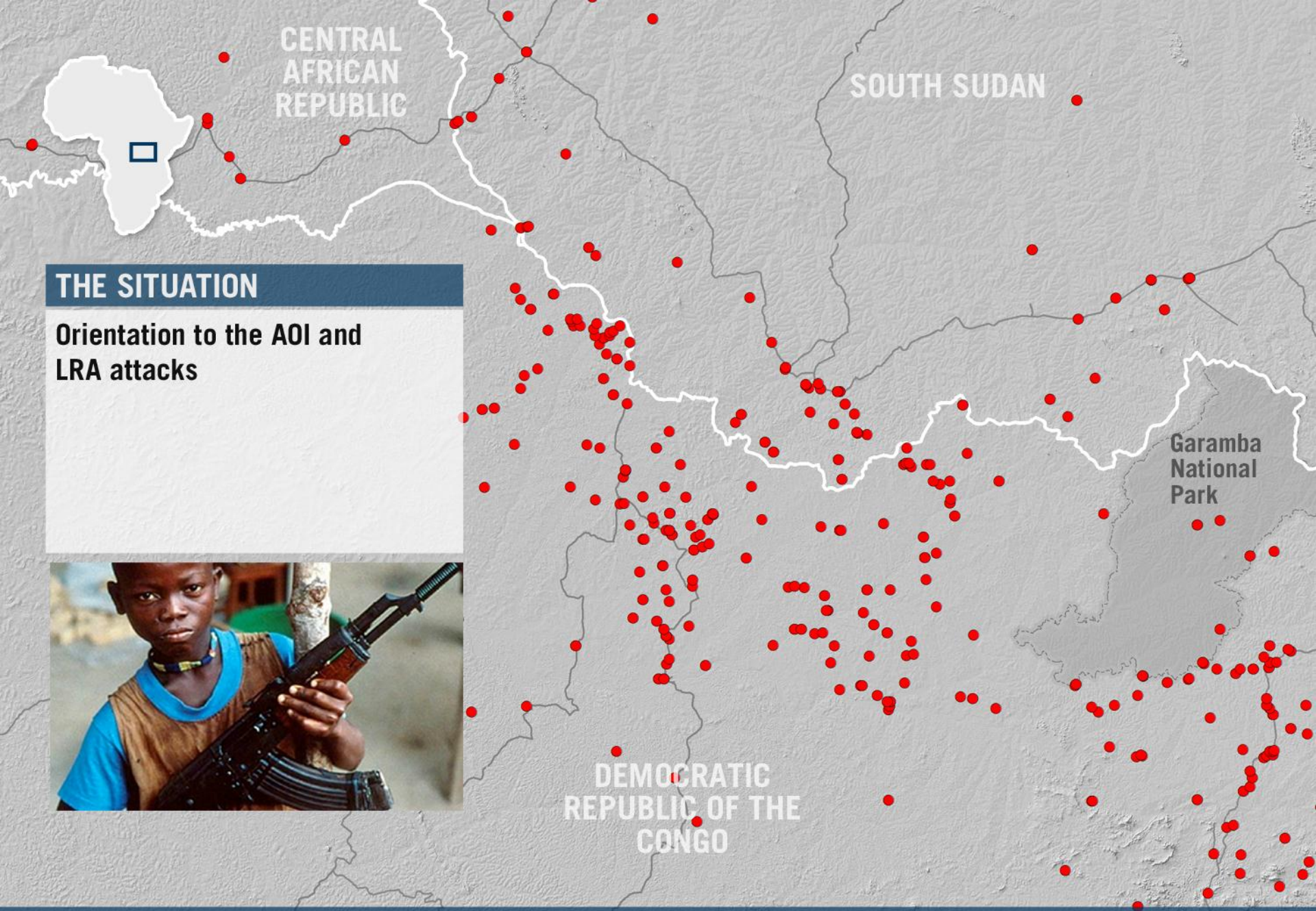
- Geospatial predictive analytics moves analysis from counting and reporting, to solution-focused collaboration and insight through the identification and characterization of actionable trends and patterns.
- The analytic output is visual and intuitive, addressing the critical "I'll know it when I see it" element that can be used to enable the end user to incorporate their tacit knowledge in the interpretation and extension of the material.
- The GeoPDF model further leverages the geospatial environment by enabling discovery and collaboration, and facilitating transdisciplinary efforts in support of truly innovative response.

# Pattern analysis of the Lord's Resistance Army (LRA) and internally displaced people (IDP)



# Displaced People and Violence

- In many locations around the world—especially Africa—violence, disease, famine, and other natural disasters are forcing people out of their traditional homelands
- These involuntary migrants, whether internally displaced people (IDPs) or refugees, often reside in “temporary” camps in close proximity to criminal and terrorist groups or people with violently opposed religious or cultural beliefs
- Identifying the most likely locations for new violence and the factors within the local environment that enable or mitigate it provides valuable insight to U.S. forces and organizations, local governments, and NGOs
- In this environment, the GeoPDF model takes incident reporting and analysis to the next level by enabling teams working in the field to more effectively explore complex geospatial patterns of activity of the Lord’s Resistance Army (LRA) and associated IDPs in central Africa.




## THE SITUATION

**Orientation to the AOI and LRA attacks**



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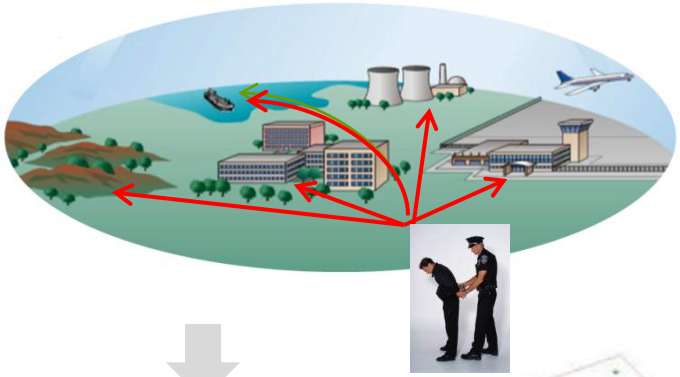
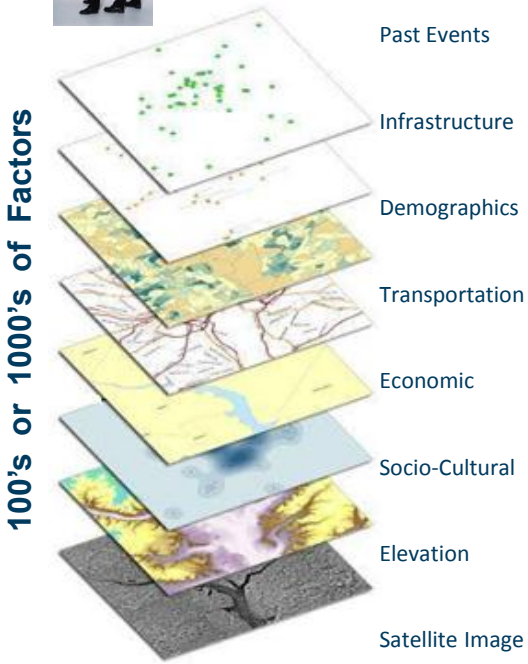
# *Geospatial Predictive Analytics…*

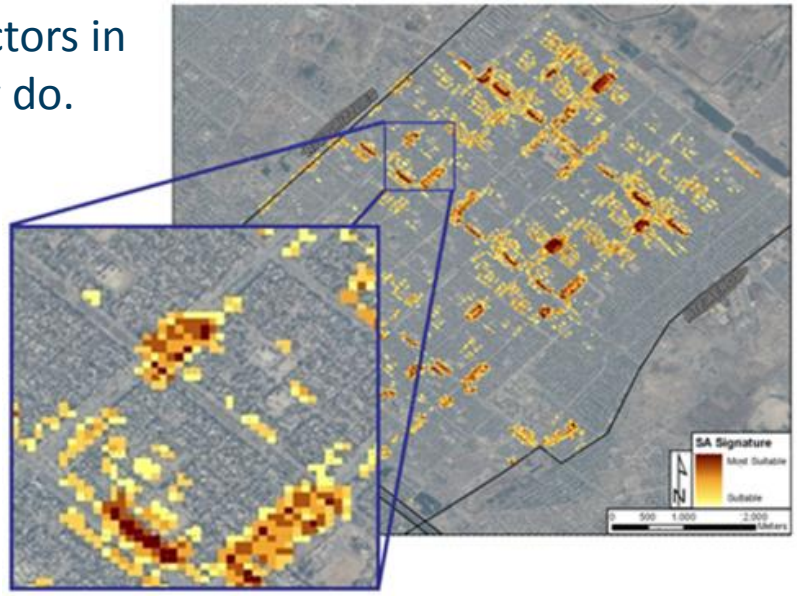
## Uses past events to predict locations for future events



People are influenced by conscious and unconscious factors in everything they do.

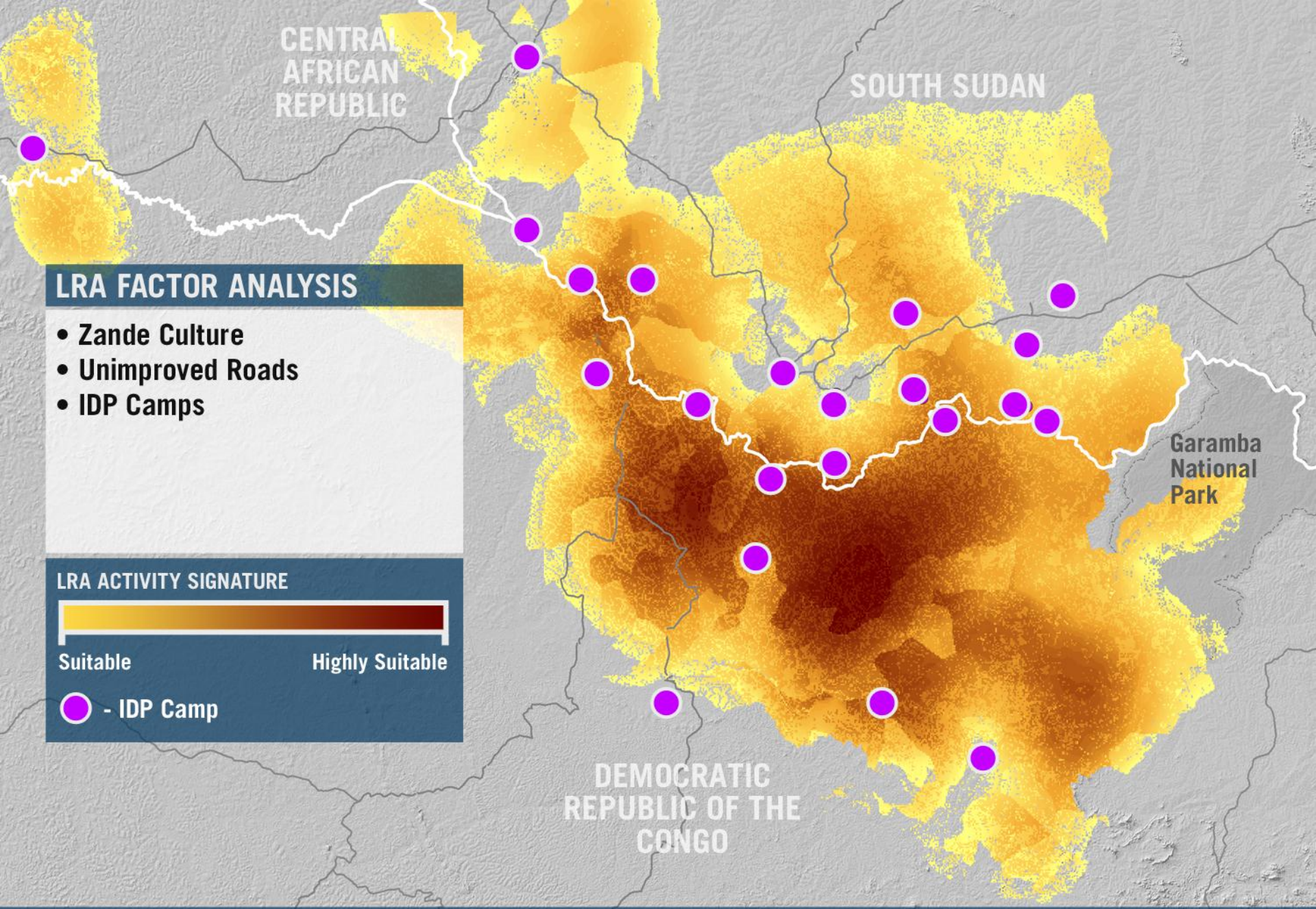
**Geospatial Predictive Analytics** statistically characterizes the environment where past actions took place …




… and then identifies statistically similar places where the likelihood is highest for future actions to occur.

**Location Matters…**

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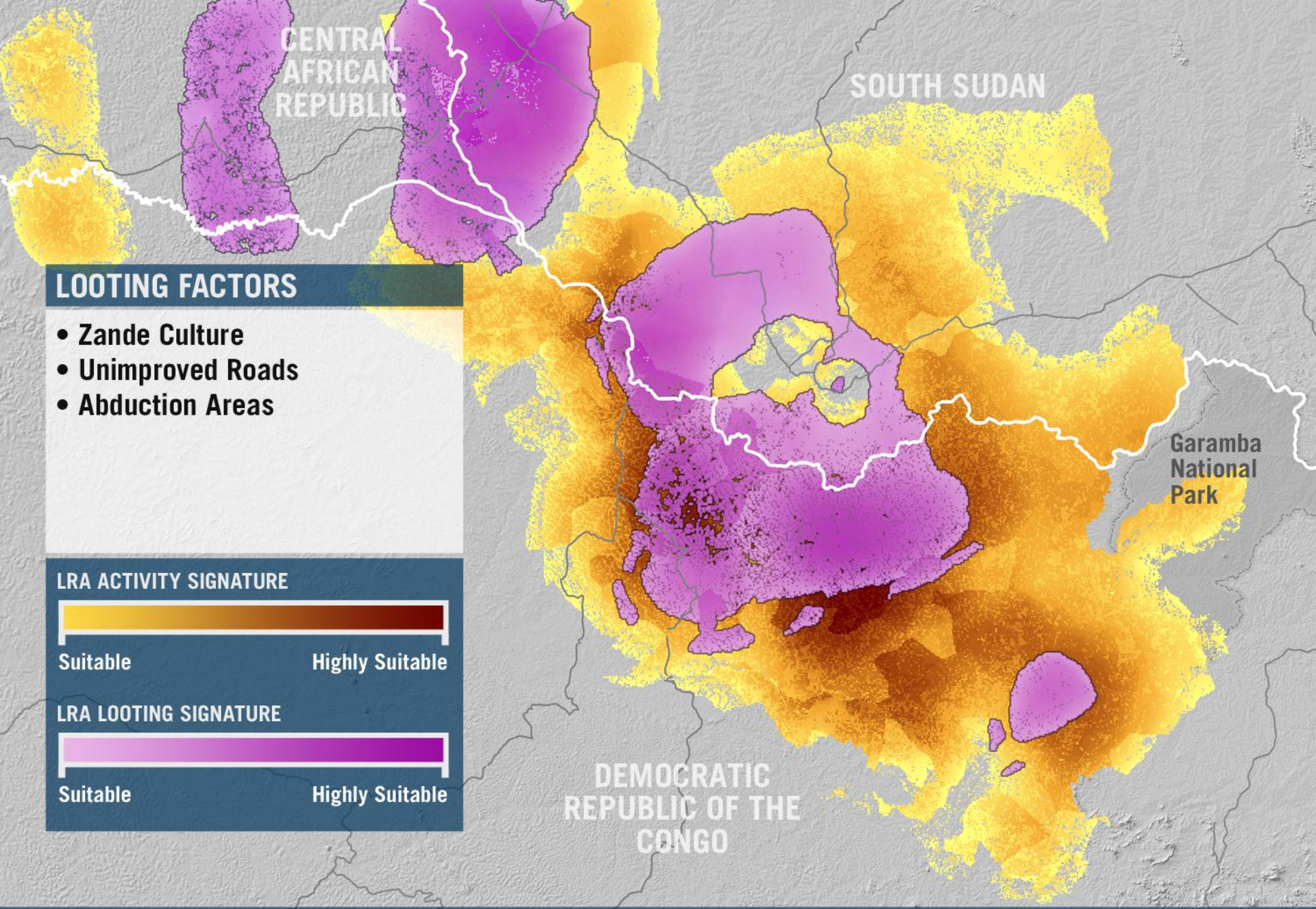
# Behavioral Analysis

Looting

Abduction

“Incidental Homicide”

Murder

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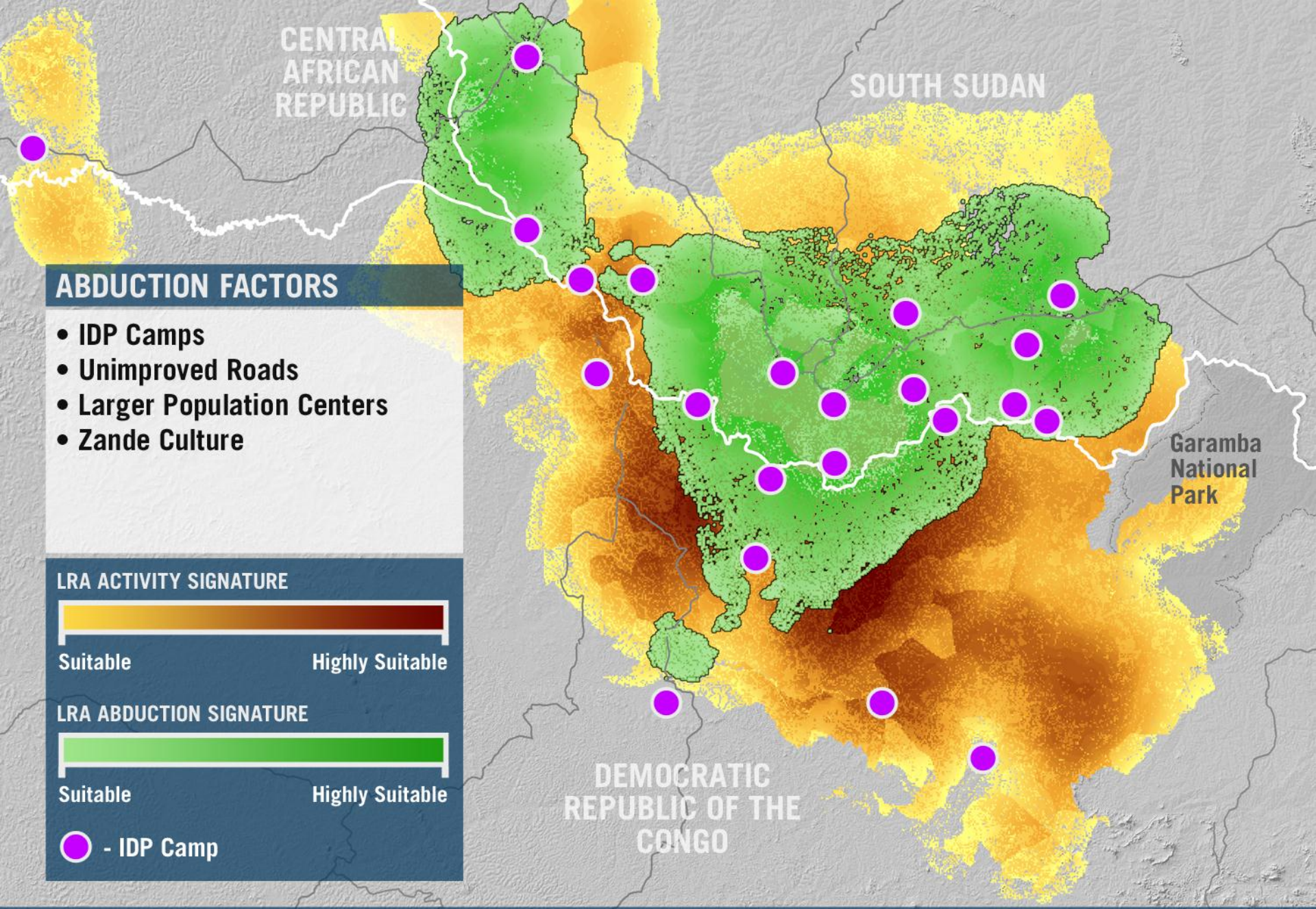


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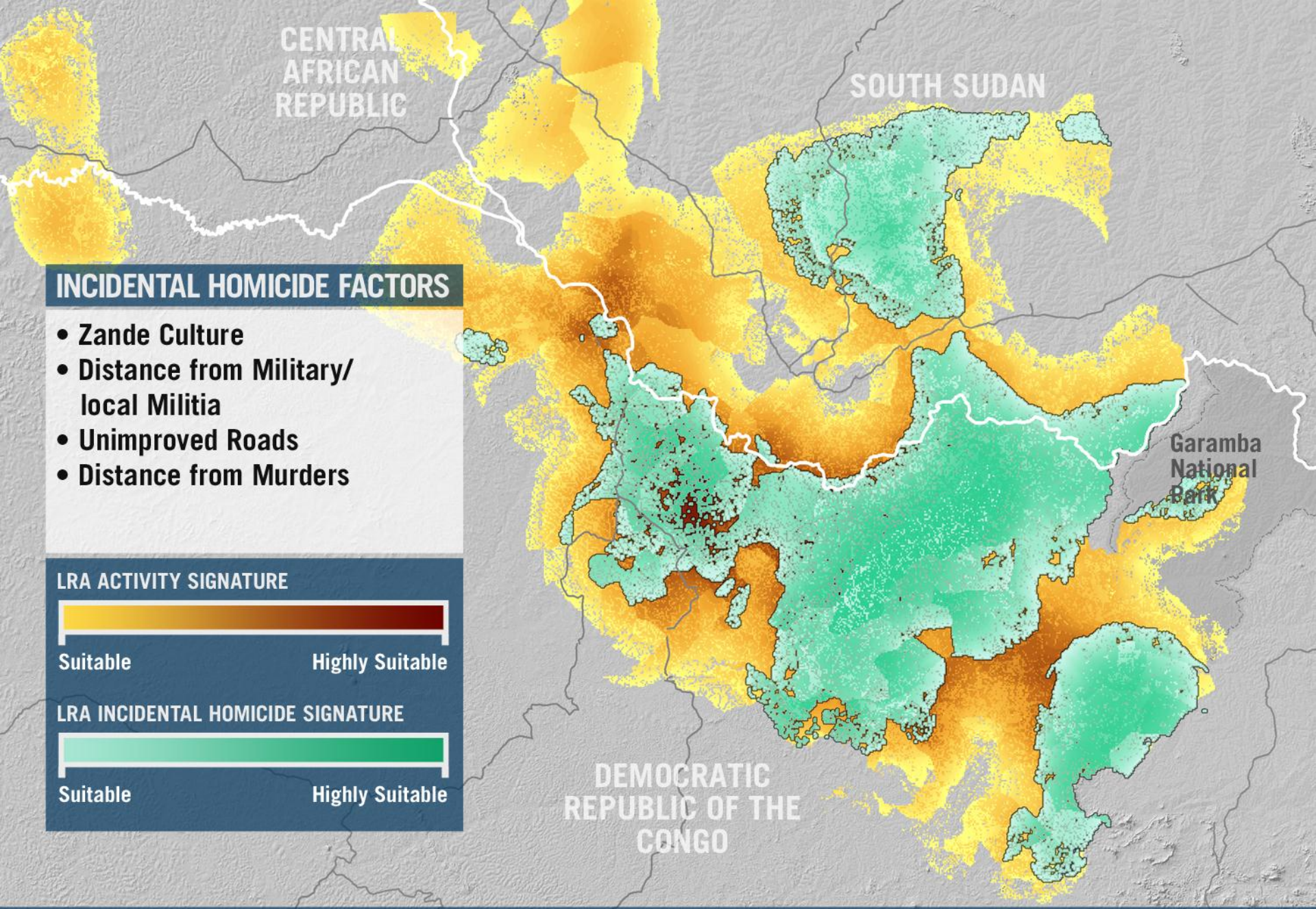


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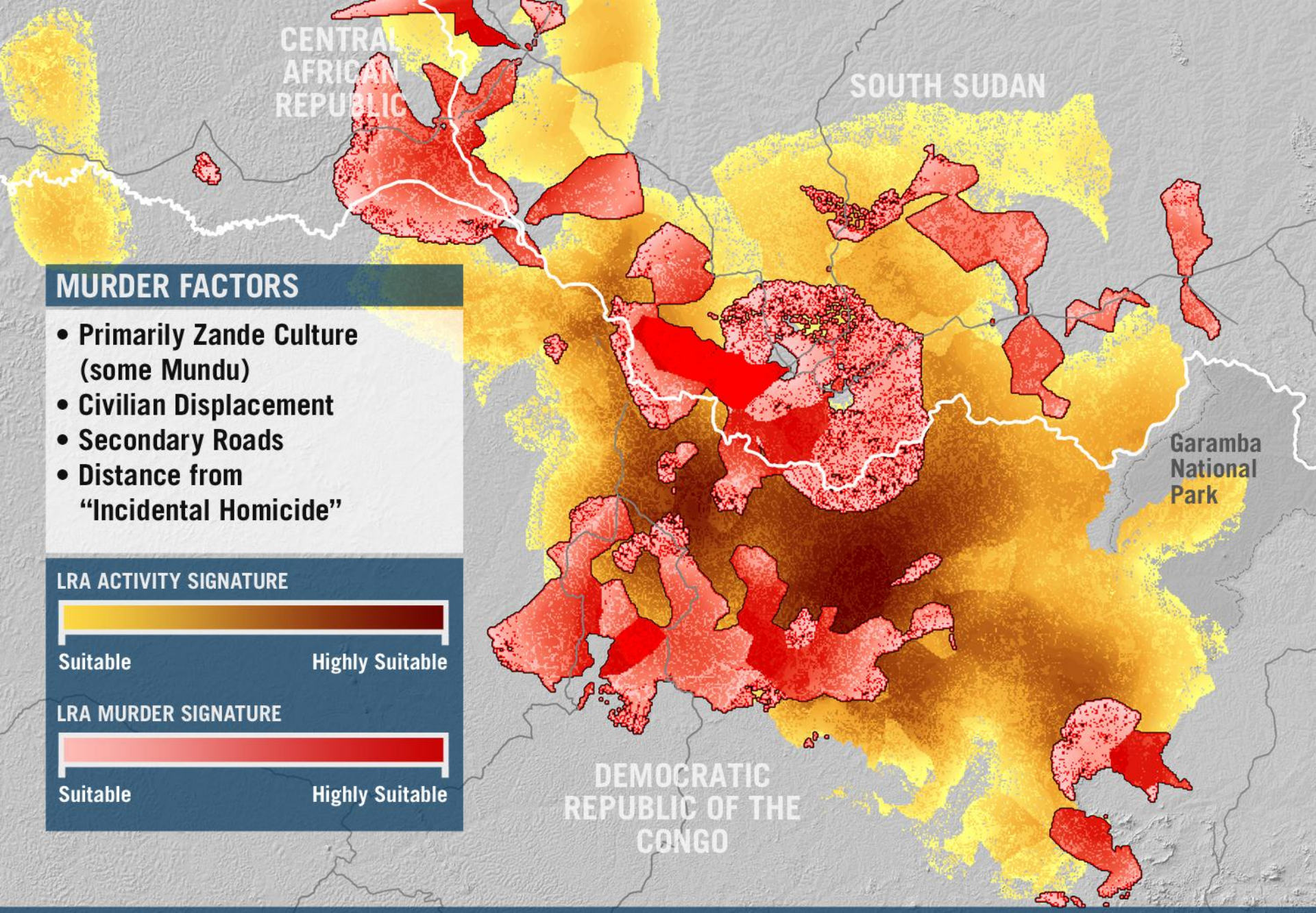


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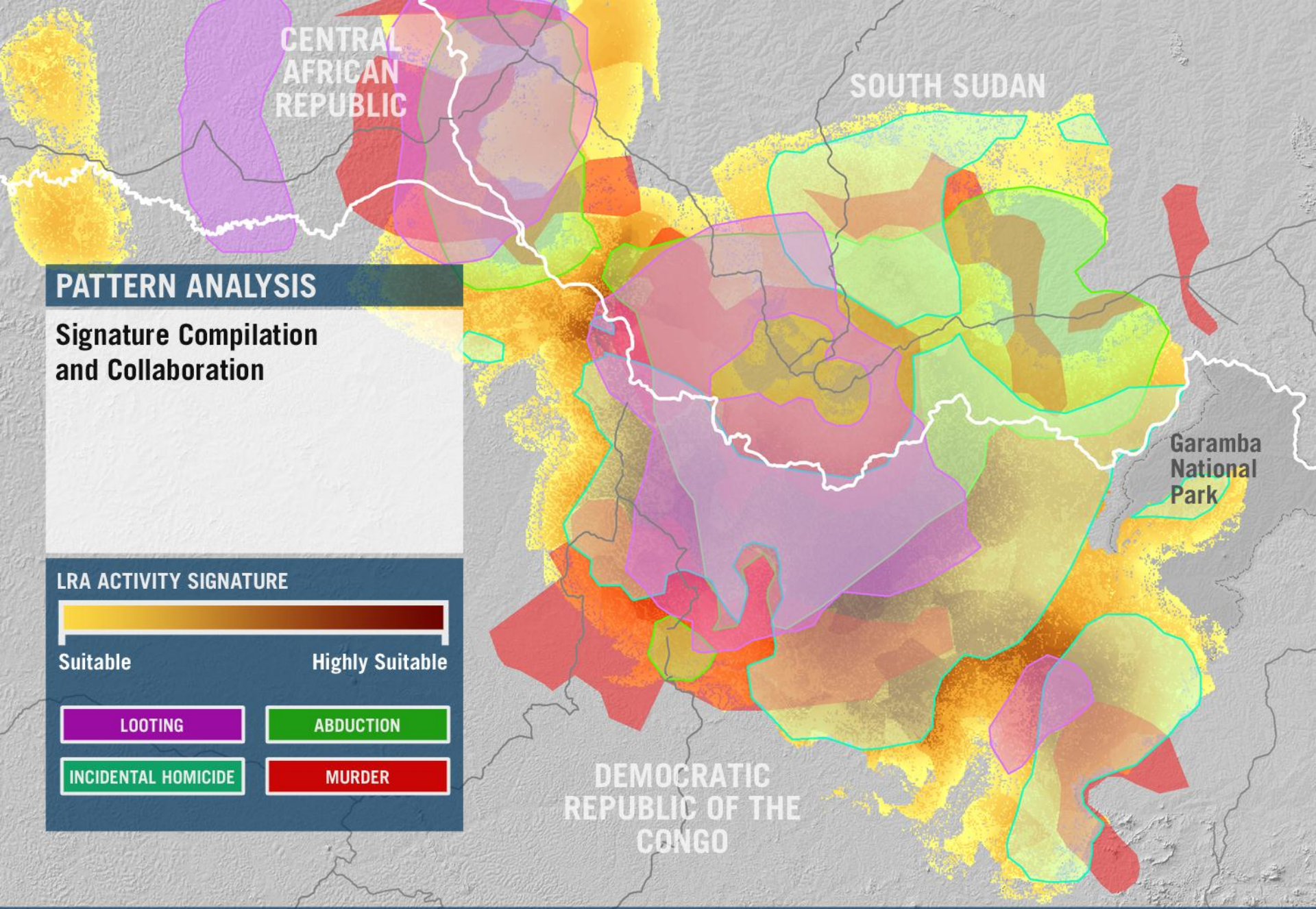


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# Summary

- Reporting, collecting, and compiling data are necessary but not sufficient – you have to be able to quickly share with those who need the information.
- Geospatial predictive analytics enables solution-focused collaboration and insight through the identification and characterization of actionable trends and patterns to:
  - Optimize scarce resources
  - Identify information-based security decisions
  - Anticipate, prevent, mitigate, and respond more effectively
- The GeoPDF model enables presentation of complex analytic output in an interactive, simple and easy to use "hands on" environment that supports transdisiplinary discovery and collaboration; facilitating multidisciplinary efforts in support of truly innovative response.
- Ultimately, the GeoPDF model takes incident reporting and tracking to the next level as it relates to using the geospatial environment as a unique force multiplier in its ability to surface novel insight. This technology can enable diverse teams working in the field to share information quickly, to get in front of challenges, identify and develop innovative approaches, and change outcomes.

# “Chance favors only the prepared mind”

Louis Pasteur